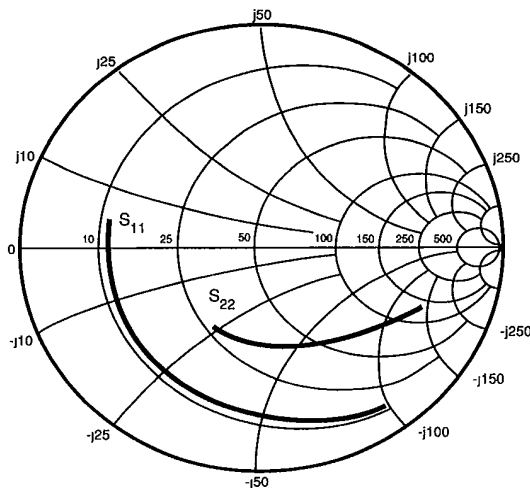




**LITTON****Preliminary Specifications****DC PERFORMANCE SPECIFICATIONS ( $T_a = 25^\circ\text{C}$ )****D-2501**

| SYMBOLS    | PARAMETERS AND CONDITIONS                        | UNITS                     | D-2501 |     |     |
|------------|--------------------------------------------------|---------------------------|--------|-----|-----|
|            |                                                  |                           | MIN    | TYP | MAX |
| $I_{DSS}$  | Saturated drain current $V_{DS}=3V, V_{GS}=0V$   | mA                        | 60     | 80  | 100 |
| $V_P$      | Pinch-off voltage $V_{DS}=3V, I_{DS}=1\text{mA}$ | V                         |        | -2  |     |
| $G_M$      | Transconductance $V_{DS}=3V, V_{GS}=0V$          | mmho                      | 40     | 50  |     |
| $I_{GS}$   | Gate to Source Leakage Current $V_{GS}=-3V$      | $\mu\text{A}$             |        | 1   | 10  |
| $I_{GD}$   | Gate to Drain Breakdown Voltage $V_{GD}=-5V$     | $\mu\text{A}$             |        | 1   | 10  |
| $\theta_J$ | Thermal Resistance (AuSn Eutectic Die Attach)    | $^\circ\text{C}/\text{W}$ |        | 100 |     |

**ABSOLUTE MAXIMUM RATINGS at  $25^\circ\text{C}$** 

| SYMBOLS   | PARAMETERS           | UNITS            | RATINGS**   |
|-----------|----------------------|------------------|-------------|
| $V_{DS}$  | Drain-Source Voltage | V                | 10          |
| $V_{GS}$  | Gate-Source Voltage  | V                | -6          |
| $I_{DS}$  | Drain Current        | mA               | $I_{DSS}$   |
| $I_{GSF}$ | Forward Gate Current | mA               | 50          |
| $P_{IN}$  | RF Input Power       | mW               | 250         |
| $T_{CH}$  | Channel Temperature  | $^\circ\text{C}$ | 175         |
| $T_{STG}$ | Storage Temperature  | $^\circ\text{C}$ | -65 to +175 |
| $P_T$     | Power Dissipation    | mW               | 500         |

**S-PARAMETERS:\*** $V_{DS}=3.5\text{ volts}, I_{DS}=15\text{mA}$ 

| FREQUENCY (GHZ) | S11 |      |       | S21  |     |       | S12 |     |     | S22 |      |
|-----------------|-----|------|-------|------|-----|-------|-----|-----|-----|-----|------|
|                 | MAG | ANG  | dB    | MAG  | ANG | dB    | MAG | ANG | dB  | MAG | ANG  |
| 2               | .85 | -55  | 10.58 | 3.38 | 134 | 10.58 | .04 | 58  | -28 | .71 | -21  |
| 4               | .71 | -95  | 8.10  | 2.54 | 104 | 8.10  | .06 | 42  | -24 | .62 | -31  |
| 6               | .64 | -124 | 6.06  | 2.01 | 79  | 6.06  | .07 | 38  | -23 | .52 | -43  |
| 8               | .60 | -145 | 3.97  | 1.58 | 60  | 3.97  | .08 | 33  | -22 | .49 | -60  |
| 10              | .57 | -156 | 2.14  | 1.28 | 41  | 2.14  | .08 | 31  | -22 | .47 | -78  |
| 12              | .56 | -169 | .91   | 1.11 | 24  | .91   | .08 | 29  | -22 | .50 | -92  |
| 14              | .61 | 178  | .26   | 1.03 | 16  | .26   | .09 | 28  | -21 | .51 | -111 |
| 16              | .62 | 174  | -1.11 | .88  | 3   | -1.11 | .10 | 23  | -20 | .52 | -122 |
| 18              | .60 | 171  | -2.27 | .77  | -12 | -2.27 | .13 | 17  | -18 | .54 | -132 |

NOTE: \* Measurements include 0.7 mil diameter Au bonding wire.

\*\* Operation of this device above any one of these parameters may cause permanent damage.